

# DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D130-701 REV. F AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D130-701 REV. 4 OR LATER APPROVED REVISION

REF. TCCA STC: SH94-14  
REF. FAA STC: SR00213NY  
REF. EASA STC: 10016996  
REF. ANAC STC: 2007S03-03

## 1.0 INTRODUCTION

It has come to DART's attention that when the D130-701-043 Heli-Utility Basket and/or the D130-701-013 Fixed Provisions kit is installed, it is necessary to remove the aft fairings in order to remove the belly cowl. The purpose of this DSI is to allow for the optional modification of the aft fairings so that they do not need to be removed to lower the belly cowl.

## 2.0 PROCEDURE

### 2.1 INITIAL INSTALLATION:


- 2.1.1. Remove the aft crosstube fairings per the Aircraft Maintenance Manual.
- 2.1.2. Remove qty(5) A0164TK050S012X bolts and qty(5) 350A21-1218-20 washers from the cap on the LH Fairing and qty (2) A0164TK050S012X bolts and qty(2) 350A21-1218-20 washers on the inside of the Fairing per Figure 1 and Figure 2 and retain hardware. Remove rivets from the top-most rib per Figure 1 and Figure 2.
- 2.1.3. Mark dimensions per Figure 1 and Figure 2. Mark the hole pattern per Figure 3 and Figure 4.
- 2.1.4. Pitch one  $\varnothing 0.196$  hole in line with the existing screw holes while maintaining edge distance and with the marked dimension per Figure 2. This will help ensure consistent alignment.
- 2.1.5. Cut along marked line and break any sharp edges. Place a barrier between the Fairing Cover and any existing structure including the rib and the attached composite panel per Figure 5.
- 2.1.6. Hand form the D5391-1 Strap to fit the curvature of the fairing and clamp in place per Figure 6.
- 2.1.7. Enlarge the remaining previously marked bolt holes to  $\varnothing 0.129$  through both the fairing and the D5391-1 Strap and cleco.
- 2.1.8. Locate the fairing cutout over the rib and clamp into place per Figure 7. Reinstall the two previously removed bolts on the inboard side to ensure proper alignment per Figure 7.
- 2.1.9. Enlarge previously marked rivet holes through the fairing cutout and the D5391-1 Strap to a diameter of  $\varnothing 0.129$  and cleco together per Figure 7.
- 2.1.10. Remove the clamps from the bottom and third holes on the rib line per Figure 7. Enlarge these holes to  $\varnothing 0.196$ .
- 2.1.11. Remove the fairing cutout and all applicable hardware.
- 2.1.12. Mark the rib as shown in Figure 8. Clamp the D5392-1 Doubler as shown and transfer drill 3X  $\varnothing 0.125$  and 2X  $\varnothing 0.157$  holes. Cut rib along line shown and break sharp edges.
- 2.1.13. Transfer drill the hole pattern for qty(2) LN29677M4 Anchor nuts on the rib as shown in Figure 9 ensuring 0.19" edge distance. Install qty(2) LN29677M4 anchor nuts using qty(4) NAS1097AD3-3 rivets on the reverse side of the rib.
- 2.1.14. Enlarge all new screw holes on the fairing and cutout piece to  $\varnothing 0.205$ .

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

BY:   
D. SHEPHERD (DE # 02)

DATE: 16.01.12  
CERT. NO.: SH94-14  
ISSUE NO.: 7

A	NEW ISSUE	VS	16.01.12
REV.	DESCRIPTION	BY	DATE
DESIGN	VS	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	VS		
CHECKED	HS	DRAWING NO.	REV. A
MFG. APPR.	CG	DSI 9738	SHEET 1 OF 16
APPROVED	HS	TITLE	SCALE
DE APPR.		<b>AFT CROSSTUBE FAIRING MODs</b>	
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- 2.1.15. Remove the D5391-1 Strap and the D5392-1 Doubler. Prime and paint per Aircraft Maintenance Manual.
- 2.1.16. Install the D5391-1 Strap to the cutout piece with qty(15) CR3522-4-02 Rivets per Figure 10. Plug the rib holes in the cutout piece as indicated in Figure 10 with qty(5) MS20426A4-3 Rivets.
- 2.1.17. Install qty(5) LN29679AM5 anchor nuts using qty(10) MS20426AD3-3 rivets on the D5391-1 Strap per Figure 11.
- 2.1.18. Install qty(4) LN29679AM5 anchor nuts using qty(8) NAS1097AD3-3 Rivets to the rib cutout per Figure 12. Install qty(3) MS20470AD4-4 Rivets to attach the D5392-1 Doubler to the rib cutout per Figure 12.
- 2.1.19. Install qty(1) LN29679AM5 anchor nut using qty(2) MS20426AD3-3 rivets on the composite panel per Figure 13.
- 2.1.20. Install the rib cutout to the rib with qty(2) 22208BC040010L bolts and qty(2) 23111AG040LE washers per Figure 14.
- 2.1.21. Install the fairing cutout and the cap to the fairing with qty(16) A0164TK050S012X bolts (qty(7) from previously retained) and qty(16) 350A21-1218-20 washers (qty(7) from previously retained) per Figure 15.
- 2.1.22. Reinstall the fairings on the aircraft per the Aircraft Maintenance Manual.

## 2.2 BELLY COWL REMOVAL:

- 2.2.1. Remove the cap, fairing cutout, qty (17) A0164TK050S012X bolts and qty(17) 350A21-1218-20 washers per Figure 15.
- 2.2.2. Remove the rib cutout, qty(2) 22208BC040010L bolts and qty(2) 23111AG040LE washers per Figure 14.
- 2.2.3. Lower the Belly cowl per the Aircraft Maintenance Manual.

## 2.3 BELLY COWL RE-INSTALLATION:

- 2.3.1. Re-install the belly cowl per the Aircraft Maintenance Manual.
- 2.3.2. Re-install the rib cutout, qty(2) 22208BC040010L bolts and qty(2) 23111AG040LE washers per Figure 14.
- 2.3.3. Re-install the cap, fairing cutout, qty (17) A0164TK050S012X bolts and qty(17) 350A21-1218-20 washers per Figure 15.

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REMOVE  
1X A0164TK050S012X BOLT  
1X 350A21-1218-20 WASHER

8.0

REMOVE RIVETS  
4 PL

CUT LINE

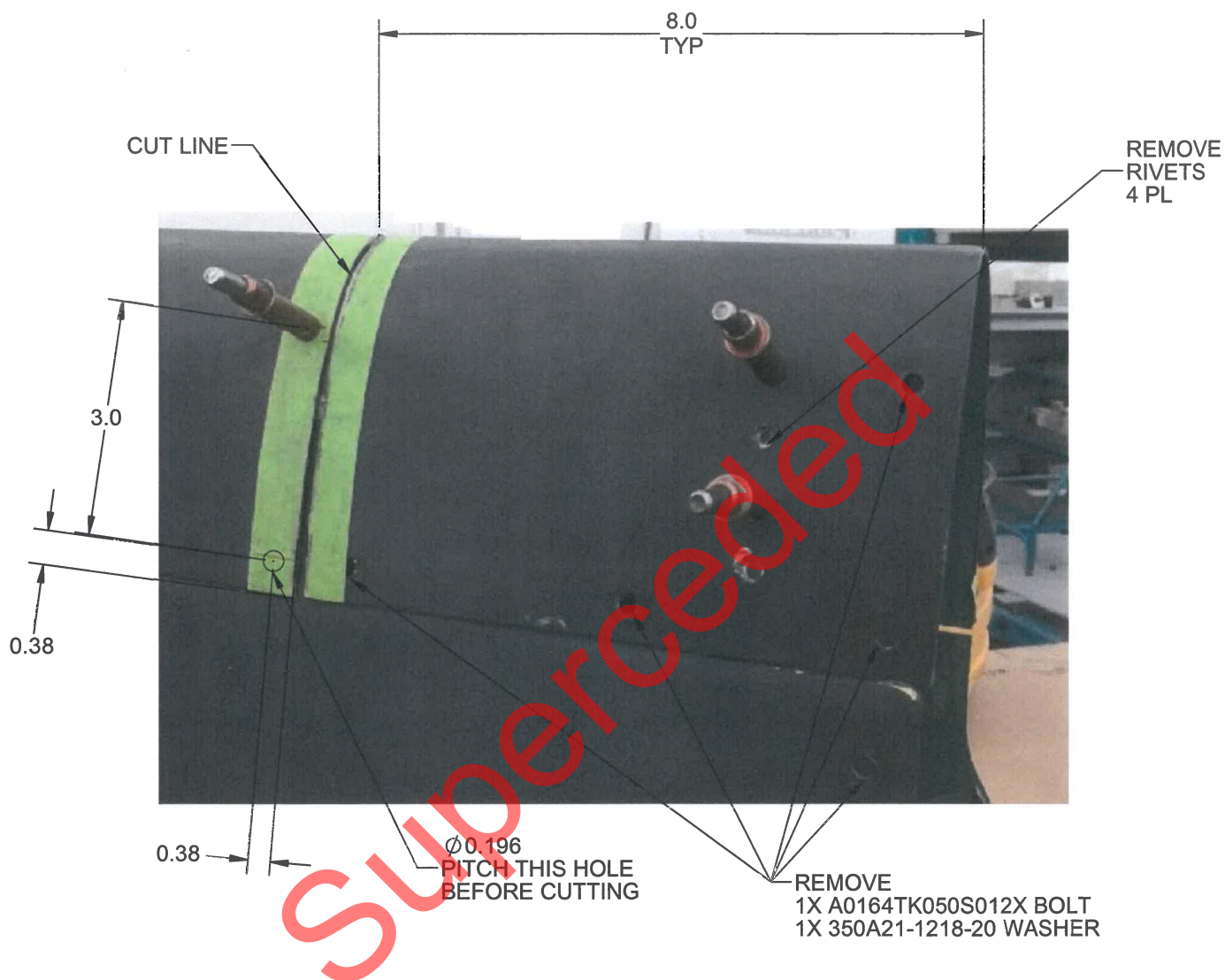
R1.3

16.2



**FIGURE 1: CUT DIMENSIONS, OUTBOARD SIDE**  
(LH SHOWN, RH OPPOSITE)

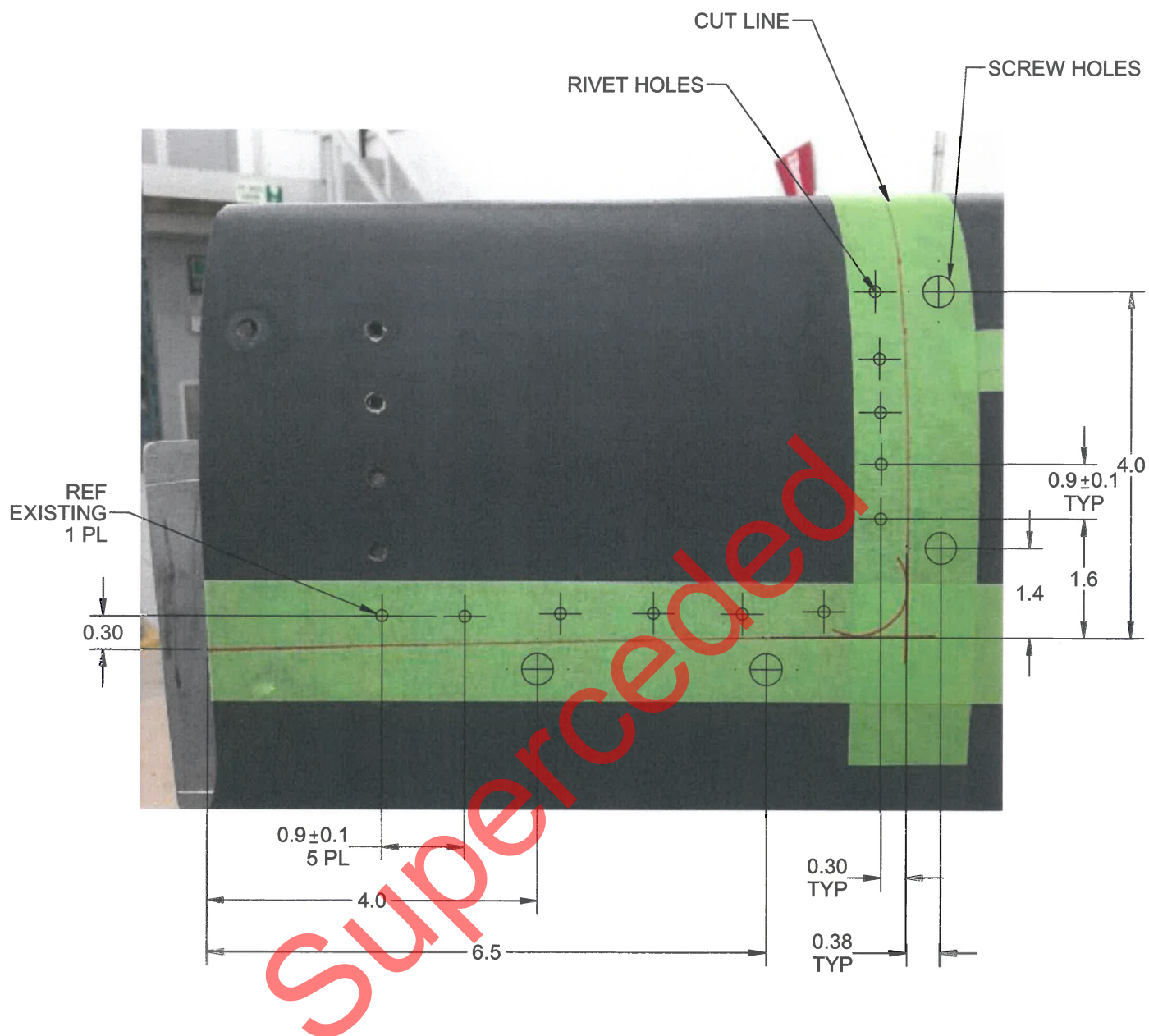
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**FIGURE 2: CUT DIMENSIONS, INBOARD SIDE**  
(LH SHOWN, RH OPPOSITE)

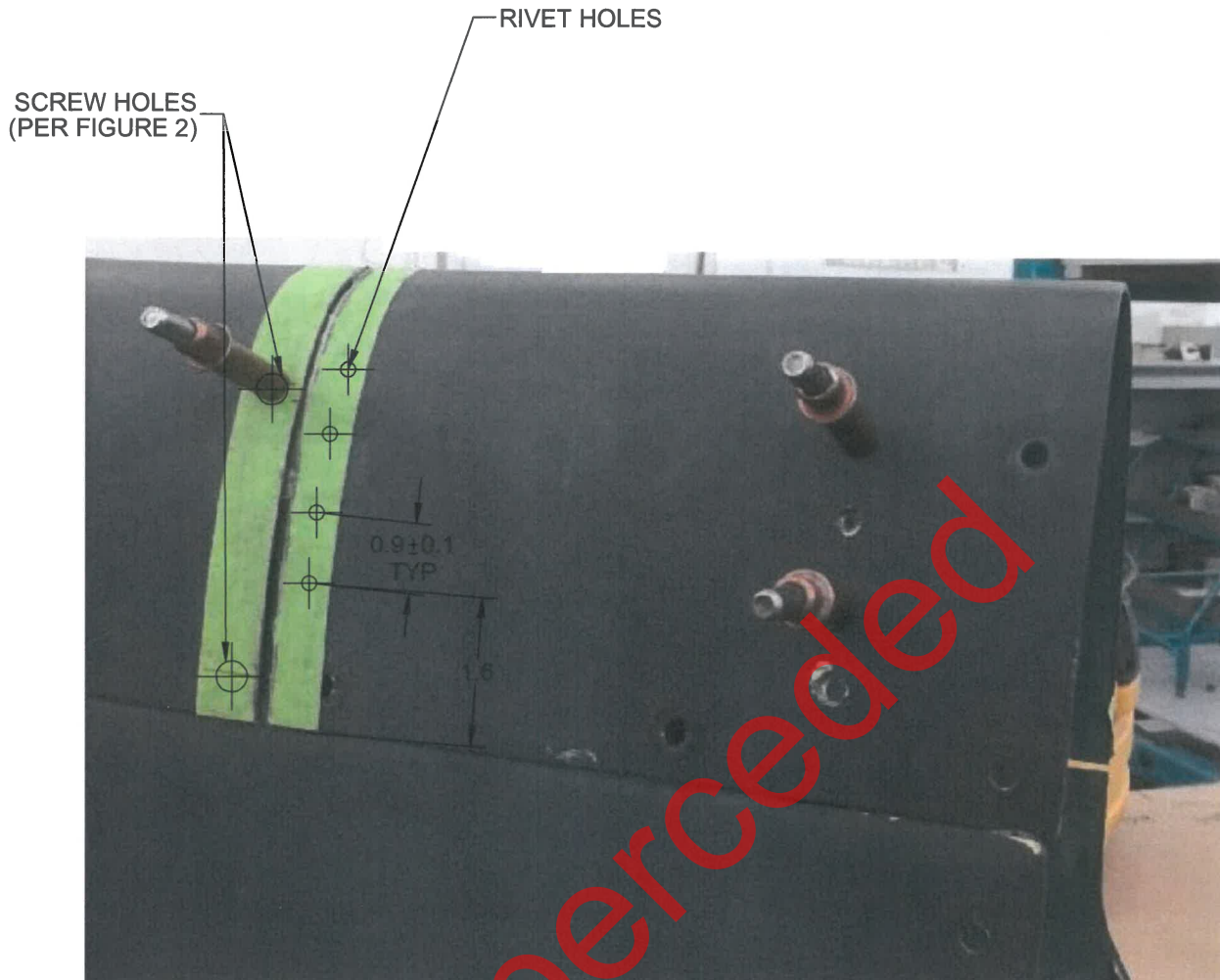
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**FIGURE 3: HOLE PATTERN, OUTBOARD**  
(LH SHOWN, RH OPPOSITE)

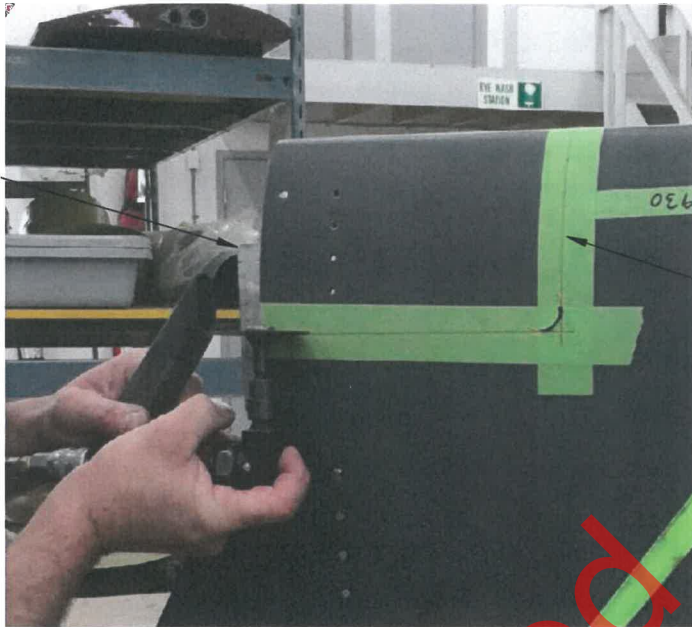
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**FIGURE 4: HOLE PATTERN, INBOARD**  
(LH SHOWN, RH OPPOSITE)

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BLOCK TO  
AVOID CUTTING  
RIB



CUT ALONG  
MARKED LINE

OUTBOARD



PLACE A BLOCK  
TO AVOID  
CUTTING  
COMPOSITE  
PANEL

INBOARD

**FIGURE 5: FAIRING CUT**  
(LH SHOWN, RH OPPOSITE)

DESIGN	VS	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
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OUTBOARD

D5391-1 STRAP



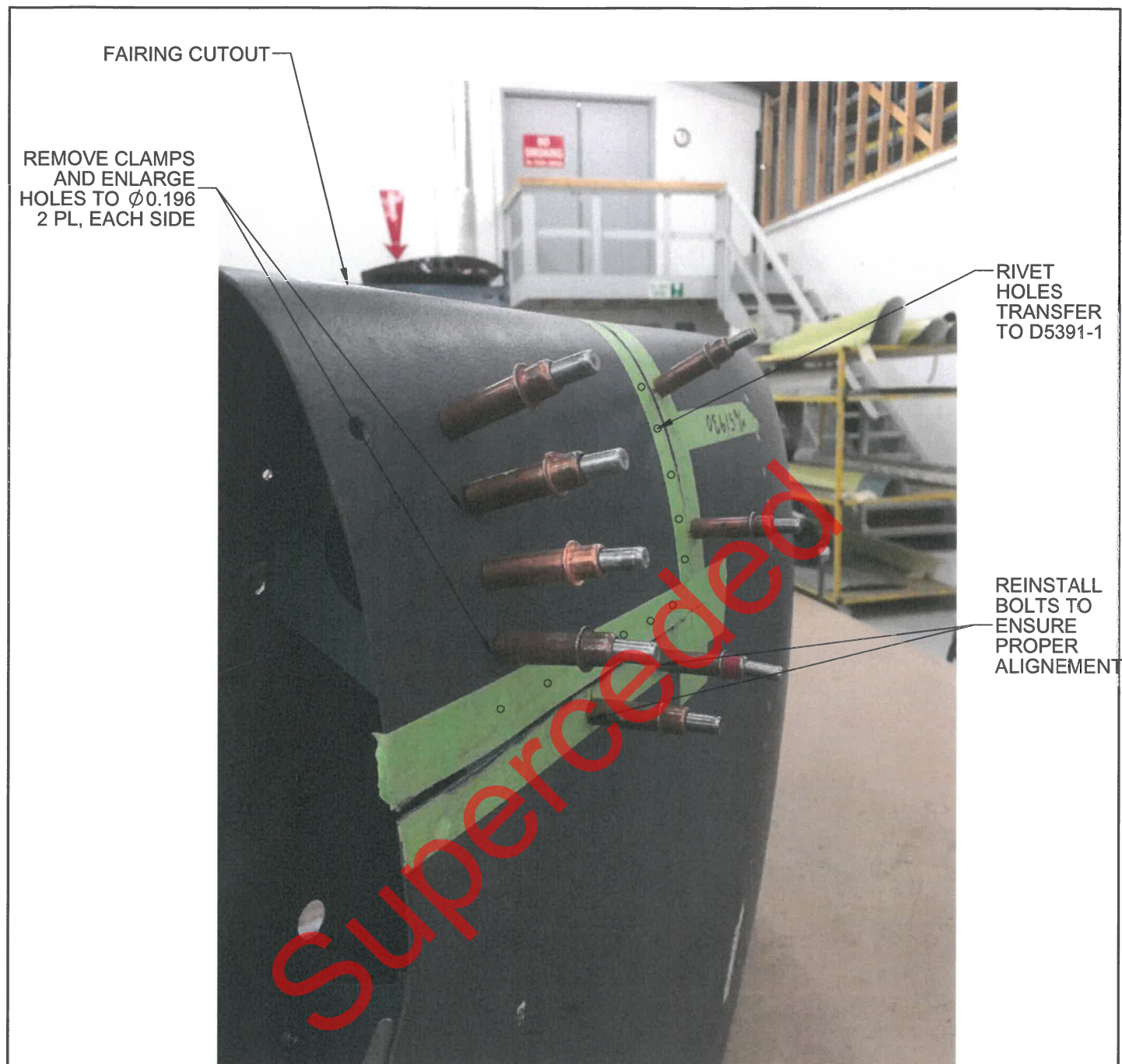
TRIM TO  
ENSURE NO OVERLAP

INBOARD


**FIGURE 6: D5391-1 PLACEMENT**  
(LH SHOWN, RH OPPOSITE)

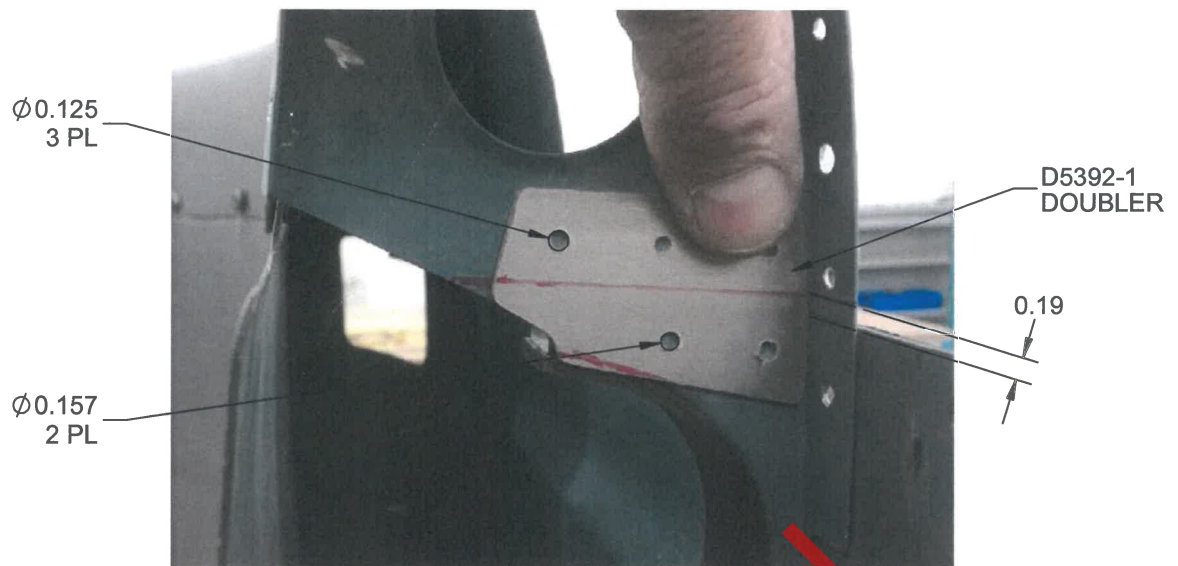
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DRAWN	VS		
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MFG. APPR.	CG		SHEET 8 OF 16
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**FIGURE 7: CUTOUT ALIGNMENT**  
(LH SHOWN, RH OPPOSITE)

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MFG. APPR.	CG	DSI 9738	SHEET 9 OF 16
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**FIGURE 8: RIB CUT**  
(LH SHOWN, RH OPPOSITE)

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**FIGURE 9: LN29677M4 ANCHOR NUTS**  
(LH SHOWN, RH OPPOSITE)

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3X MS20426A4-3  
RIVETS

11X CR3522-4-02  
RIVETS

D5391-1  
STRAP

OUTBOARD

4X CR3522-4-02  
RIVETS

D5391-1  
STRAP

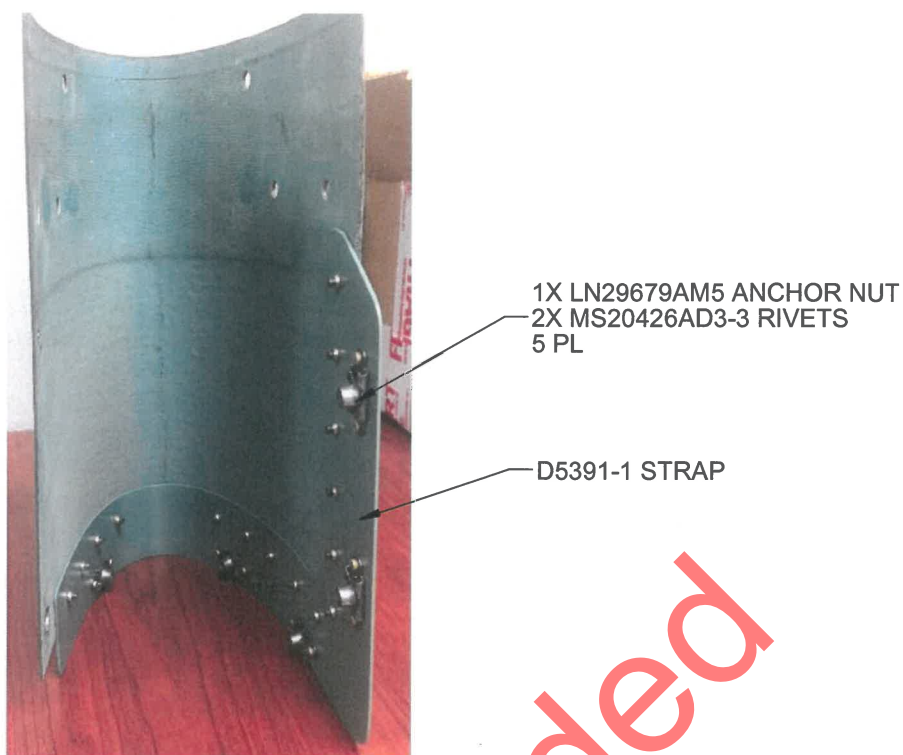
2X MS20426A4-3  
RIVETS

INBOARD

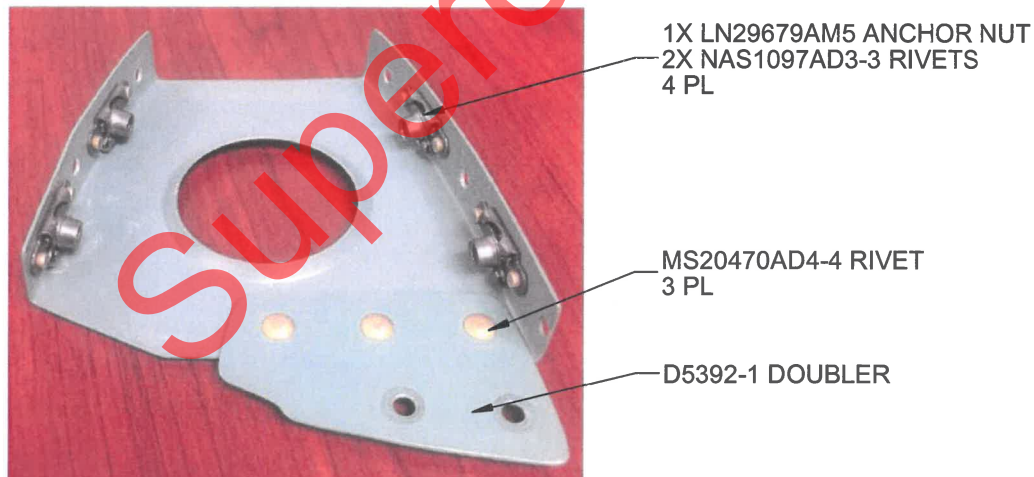
**FIGURE 10: D5391-1 STRAP INSTALLATION**  
(LH SHOWN, RH OPPOSITE)

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**FIGURE 11: ANCHOR NUT INSTALLATION**  
(LH SHOWN, RH OPPOSITE)



**FIGURE 12: ANCHOR NUT INSTALLATION**  
(LH SHOWN, RH OPPOSITE)

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1X LN29679AM5 ANCHOR NUT  
2X MS20426AD3-3 RIVETS

0.30



**FIGURE 13: ANCHOR NUT INSTALLATION**  
(LH SHOWN, RH OPPOSITE)



RIB CUTOUT

D5392-1 DOUBLER


1X 22208BC040010L BOLT  
1X 2311AG040LE WASHER  
2 PL

**FIGURE 14: RIB CUTOUT INSTALLATION**  
(LH SHOWN, RH OPPOSITE)

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**FIGURE 15: FAIRING ASSEMBLY**  
(RH SHOWN, LH OPPOSITE)

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### 3.0 WEIGHT AND BALANCE

Aircraft Weight and Balance are not affected by this change.

### 4.0 PARTS LIST

QTY -011	PART NUMBER	DESCRIPTION
X	DSI 9738-011	AFT FAIRING MODIFICATION
2	D5391-1	STRAP
2	D5392-1	DOUBLER
4	22208BC040010L	BOLT, HEX HEAD
4	23111AG040LE	WASHER, FLAT
20	350A21-1218-20	WASHER
20	A0164TK050S012X	BOLT, SPECIAL, WIDE HEAD
30	CR3522-4-02	RIVET
4	LN29677M4	ANCHOR NUT
20	LN29679AM5	ANCHOR NUT
24	MS20426AD3-3	RIVET
10	MS20426A4-3	RIVET
6	MS20470AD4-4	RIVET
24	NAS1097AD3-3	RIVET

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